Instructor: Tam Do
Office: 42 Herman Brown Hall
Email: tam.do@rice.edu
Class Webpage: on Owlspace

Time: MWF 9:00-9:50AM
Classroom: 423 Herman Brown Hall
Office Hours: M 12-1pm, Th 1:15-2:15pm, or by appointment.

Recitations: TBA:

Text: James Stewart: *Calculus Early Transcendentals 7E.* We will cover chapters 7, 8, 10 and 11. The bookstore has a custom-made book for Rice, which includes a webAssign account (see below). The book was designed to minimize costs for you, provided you want a paper copy of the book. You can also use Stewart's Single Variable Calculus: Early Transcendentals (7th Edition) or Stewart's Calculus: Early Transcendentals (7th Edition), but you will have to purchase a webAssign account separately.

Grading: Your homework will count as 20% of your final grade (10% webAssign, 10% paper assignments). The remaining portion of your grade will be the **maximum** of the following four options:

- 25% Midterm I, 25% Midterm II, 30% Final.
- 20% Midterm I, 25% Midterm II, 35% Final.
- 25% Midterm I, 20% Midterm II, 35% Final.
- 20% Midterm I, 20% Midterm II, 40% Final.

Expectations: I expect you to attend every class and to arrive on time. It is your responsibility to keep yourself informed of any announcements, syllabus adjustments, or policy changes made during scheduled classes. Due to the smaller class size of this section, the hope is that eventually everyone participates in class on a regular basis.

Homework: There are **two** components to the homework: webAssign and problems to be handed in.

1. WebAssign Homework will be due **every class day at 9:00PM** (starting on Wednesday, January 14th). It will be assigned through the WebAssign website. Each student needs to sign up for a WebAssign account and get familiar with WebAssign as soon as possible. Most homework problems are to be completed online, and are quite similar to textbook exercises.

   The `webAssign.net` key for this course is: **rice.tx 4099 5903**.

   It is **strongly recommended** that you keep a notebook where you write down complete solutions to the assigned exercises; you can use this notebook to study for exams. Imagine that a fellow student will be reading your homework notebook to study for an exam. If your work is not detailed enough to be useful, it is unlikely to earn much credit if it were being graded. Another student reading your solutions should be able to guess at the question your are trying to answer without referring to the textbook.

2. Every week I will assign 6-8 problems from the text that you have to hand in on **Fridays at the beginning of lecture**. The first such set of problems will be due on **Friday, January 16th**. These problems will be of a nature that cannot be covered by online systems. They will be graded and returned to you a week after you hand them in.

You can collaborate with other students in the class, but make sure you understand the solution to a problem before typing in your answer on WebAssign.

Late homework assignments will not be accepted for ANY reason – instead, your four lowest webassign scores and your lowest "written assignment" will be dropped.

Exams: There will be two **in-class** midterm tests during the semester. They will take place on **Monday, February 9th** and on **Monday, March 30th**.

Final exam: The date for the final exam is not available at this time. It is the policy of the Mathematics Department that no final may be given early to accommodate student travel plans. If you make travel plans that later turn out to conflict with the scheduled exam, then it is your responsibility to either reschedule your travel plans or take a zero in the final.

Books, notes, and calculators will **not** be allowed on exams. Make-up exams will be allowed only in the case of a documented medical emergency. If an exam conflicts with a holiday you observe, please let me know before the end of the first week of classes.

Disability Support: Any student with a documented disability seeking academic adjustments or accommodations is requested to speak with me during the first two weeks of class. All such discussions will remain as confidential as possible. Students with disabilities will need to also contact Disability Support Services in the Allen Center.

Tentative Schedule:

Week 1:
01/12 Introduction/Review: Integration
01/14 Review: Substitution
01/16 Section 7.1: Integration by parts

Week 2:
01/19 No class, Martin Luther King, Jr. Day
01/21 Sections 7.2–7.3: Trigonometric Integrals/Trigonometric Substitution
01/23 Section 7.3: Trigonometric Substitution

Week 3:
01/26 Section 7.4: Partial Fractions I
01/28 Section 7.4: Partial Fractions II
01/30 Section 7.5: Strategy for Integration

Week 4:
02/02 Section 7.8: Improper Integrals I
02/04 Section 7.8: Improper Integrals II
02/06 Chapter 7: Review

Week 5:
02/09 MIDTERM I, In-Class
02/11 Section 11.1: Sequences I
02/13 Section 11.1: Sequences II

Week 6:
02/16 Section 11.2: Series I
02/18 Section 11.2: Series II
02/20 Section 11.3: Integral Test I

Week 7:
02/23 Section 11.3: Integral Test II
02/25 Section 11.4: Comparison Test
02/27 Section 11.4: Limit Comparison Test

Week 8:SPRING BREAK: February 28th — March 7th

Week 9:
03/09 Section 11.5: Alternating Series
03/11 Section 11.6: Absolute convergence; Ratio and Root tests I
03/13 Section 11.6: Absolute convergence; Ratio and Root tests II

Week 10:
03/16 Section 11.8: Power Series I

03/18 Section 11.9: Power Series II
03/20 Section 11.10: Taylor Series I

Week 11:
03/23 Section 11.10: Taylor Series II
03/25 Section 11.10: Taylor Series III
03/27 Chapter 11: Review

Week 12:
03/30 MIDTERM II, In-Class
04/01 Section 11.11: Applications of Taylor Polynomials
04/03 No class, Midterm Recess

Week 13:
04/06 Section 8.1: Arc Length
04/08 Section 8.2: Area of a surface of revolution
04/10 Section 10.1: Parametric Curves

Week 14:
04/13 Section 10.2: Definite Integration
04/15 Section 10.3: Polar Coordinates I
04/17 Section 10.3: Polar Coordinates II

Week 15:
04/20 Section 10.4: Area and lengths in polar coordinates I
04/22 Section 10.4: Area and lengths in polar coordinates II
04/24 Review; last day of classes